TABLE 3

SAMPLING AND DESIGN MATRIX
FALCON REFINERY SUPERFUND SITE
INGLESIDE, TEXAS

| SAMPLING TYPE | AREA OF CONCERN NUMBER | INTERVAL (feet bgs) | ANALYSES | | | | |
|---|---|---|---|---|---|---|---|
| | | | TCL VOC | TCL SVOC | TAL METALS | PCBs | Herbicides and Pesticides |
| **ON-SITE RANDOM GRID SURFACE AND SUBSURFACE SOIL SAMPLES** | | | | | | | |
| Geoprobe | 1N | 0 to 0.5 | 4 | 4 | 4 | 1 | 1 |
| | | 0.5 to 5.0 | 4 | 4 | 4 | 1 | 1 |
| | 1S | 0 to 0.5 | 20 | 20 | 20 | 2 | 2 |
| | | 0.5 to 5.0 | 20 | 20 | 20 | 2 | 2 |
| **TOTAL FOR ON-SITE AOC-1 RANDOM GRID SAMPLES** | | | **48** | **48** | **48** | **6** | **6** |
| **QC FOR RANDOM GRID SAMPLES** | | | | | | | |
| QC MS/MSD* {1/20 organics} | | Various | 3 | 3 | N/A | N/A | 1 |
| QC MS/MD* {1/20 organics} | | Various | N/A | N/A | N/A | 1 | N/A |
| QC trip blank | | 1 | N/A | N/A | N/A | N/A | N/A |
| QC field duplicate {1/10} | | Various | 5 | 5 | 5 | 1 | 1 |
| QC EQUIPMENT RINSATE | | N/A | 2 | 2 | 2 | 1 | 1 |
| **TOTALGRID QC SAMPLES** | | | **10** | **10** | **7** | **3** | **0** |
| Geoprobe | 2 | 0 to 0.5 | 4 | 4 | 4 | 1 | 1 |
| | | 0.5 to 5.0 | 4 | 4 | 4 | 1 | 1 |
| | 4 | 0 to 0.5 | 5 | 5 | 5 | 1 | 1 |
| | | 0.5 to 5.0 | 5 | 5 | 5 | 1 | 1 |
| **TOTAL FOR ON-SITE AOC-2 and AOC-4 RANDOM GRID SAMPLES** | | | **18** | **18** | **18** | **4** | **4** |
| **QC FOR GRID SOIL SAMPLES** | | | | | | | |
| QC MS/MSD* {1/20 organics} | | Various | 1 | 1 | N/A | N/A | 1 |
| QC MS/MD* {1/20 organics} | | Various | 1 | 1 | N/A | N/A | N/A |
| QC trip blank | | 1 | 1 | 1 | N/A | 1 | N/A |
| QC field duplicate {1/10} | | Various | 2 | 2 | 2 | 1 | 1 |
| QC equipment rinsate | | N/A | 1 | 1 | 1 | 1 | 1 |
| **TOTAL GRID QC SAMPLES** | | | **6** | **6** | **3** | **3** | **3** |

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| SAMPLING TYPE | AREA OF CONCERN NUMBER | INTERVAL (feet bgs) | ANALYSES | | | | |
|---|---|---|---|---|---|---|---|
| | | | TCL VOC | TCL SVOC | TAL METALS | PCBs | Herbicides and Pesticides |
| **OFF-SITE JUDGMENTAL SURFACE AND SUBSURFACE SAMPLES** | | | | | | | |
| Geoprobe | 3 | 0 to 0.5 | 0 | 0 | 0 | 0 | 0 |
| | | 0.5 to 5.0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 0 to 0.5 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 0 to 0.5 | 0 | 0 | 0 | 0 | 0 |
| | | 0.5 to 5.0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 0 to 0.5 | 0 | 0 | 0 | 0 | 0 |
| | | 0.5 to 5.0 | 0 | 0 | 0 | 0 | 0 |
| **TOTAL FOR ON-SITE JUDGMENTAL SAMPLES** | | | **0** | **0** | **0** | **0** | **0** |
| **QC FOR OFF-SITE JUDGMENTAL SAMPLES** | | | | | | | |
| QC MS/MSD* {1/20 organics} | | Various | 0 | 0 | N/A | N/A | 0 |
| QC MS/MD* {1/20 organics} | | Various | N/A | N/A | N/A | 0 | N/A |
| QC trip blank {1/cooler for aqueous VOCs} | | N/A | N/A | N/A | N/A | N/A | N/A |
| QC field duplicate {1/10} | | Various | 0 | 0 | 0 | 0 | 0 |
| QC EQUIPMENT RINSATE | | N/A | 0 | 0 | 0 | 0 | 0 |
| **TOTAL JUDGMENTAL QC SAMPLES** | | | **0** | **0** | **0** | **0** | **0** |
| **OFF-SITE RANDOM GRID SEDIMENT SAMPLES** | | | | | | | |
| Grab | 3 | 0-0.5 | 6 | 6 | 6 | 1 | 1 |
| | 5 | 0-0.5 | 7 | 7 | 7 | 1 | 1 |
| **TOTAL FOR GRID SAMPLES** | | | **6** | **6** | **6** | **1** | **1** |
| **QC FOR GRID SOIL SAMPLES** | | | | | | | |
| QC MS/MSD* {1/20 organics} | | Various | 1 | 1 | N/A | N/A | 1 |
| QC MS/MD* {1/20 organics} | | Various | N/A | N/A | N/A | N/A | N/A |
| QC trip blank {1/cooler for aqueous VOCs} | | N/A | N/A | N/A | N/A | N/A | N/A |
| QC field duplicate {1/10} | | Various | 1 | 1 | 1 | 1 | 1 |
| QC equipment rinsate | | N/A | 1 | 1 | 1 | 1 | 1 |
| **TOTAL GRID QC SAMPLES** | | | **3** | **3** | **2** | **2** | **0** |

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FALCON REFINERY SUPERFUND SITE
INGLESIDE, TEXAS

| SAMPLING TYPE | AREA OF CONCERN NUMBER | INTERVAL (feet bgs) | ANALYSES | | | | |
|---|---|---|---|---|---|---|---|
| | | | TCL VOC | TCL SVOC | TAL METALS | PCBs | Herbicides and Pesticides |
| **GROUNDWATER SAMPLING (7 Monitor Wells)** | | | | | | | |
| Bailer | 1N | Shallow aquifer | 2 | 2 | 2 | 1 | 1 |
| | 1S | Shallow aquifer | 5 | 5 | 5 | 1 | 1 |
| **TOTAL FOR MONITOR WELL SAMPLES** | | | **7** | **7** | **7** | **2** | **2** |
| **QC FOR AQUEOUS SAMPLES (MONITOR WELLS)** | | | | | | | |
| QC MS/MSD* {1/20 organics} | | Various | 1 | 1 | N/A | N/A | 1 |
| QC MS/MD* {1/20 organics} | | Various | N/A | N/A | N/A | 0 | N/A |
| QC trip blank {1/cooler for aqueous VOCs} | | N/A | 2 | 1 | N/A | N/A | N/A |
| QC field duplicate {1/10} | | Various | 1 | 1 | 1 | 1 | 1 |
| QC Equipment Rinsate | | Various | 1 | 1 | 1 | 1 | 1 |
| **TOTAL MONITOR WELL QC SAMPLES** | | | **5** | **4** | **2** | **2** | **3** |
| **SURFACE WATER SAMPLING** | | | | | | | |
| Grab | 3 | Surface | 16 | 16 | 16 | 2 | 2 |
| **TOTAL FOR SURFACE WATER SAMPLES** | | | **16** | **16** | **16** | **2** | **2** |
| **QC FOR AQUEOUS SAMPLES (SURFACE WATER)** | | | | | | | |
| QC MS/MSD* {1/20 organics} | | Various | 1 | 1 | N/A | N/A | 1 |
| QC MS/MD* {1/20 organics} | | Various | N/A | N/A | N/A | 0 | N/A |
| QC trip blank {1/cooler for aqueous VOCs} | | N/A | 2 | 2 | N/A | N/A | N/A |
| QC field duplicate {1/10} | | Various | 2 | 2 | 1 | 1 | 1 |
| QC Equipment Rinsate | | Various | 1 | 1 | 1 | 1 | 1 |
| **TOTAL QC SAMPLES** | | | **6** | **6** | **2** | **2** | **3** |

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FALCON REFINERY SUPERFUND SITE
INGLESIDE, TEXAS

| SAMPLING TYPE | AREA OF CONCERN NUMBER | INTERVAL (feet bgs) | ANALYSES | | | | |
|---|---|---|---|---|---|---|---|
| | | | TCL VOC | TCL SVOC | TAL METALS | PCBs | Herbicides and Pesticides |
| **BACKGROUND SAMPLES (JUDGMENTAL)** | | | | | | | |
| Grab | Sediment | 0-0.5 | 12 | 12 | 12 | 0 | 0 |
| Geoprobe | Surface Soil | 0-0.5 | 6 | 6 | 6 | 0 | 0 |
| | Subsurface Soil | 0.5-5.0 | 6 | 6 | 6 | 0 | 0 |
| **TOTAL FOR JUDGMENTAL SAMPLES** | | | **24** | **24** | **24** | **0** | **0** |
| **BACKGROUND GROUNDWATER SAMPLING (6 Temporary Wells)** | | | | | | | |
| Bailer | Groundwater | Shallow aquifer | 6 | 6 | 6 | 0 | 0 |
| **TOTAL FOR JUDGMENTAL SAMPLES** | | | **6** | **6** | **6** | **0** | **0** |
| **BACKGROUND SURFACE WATER SAMPLING** | | | | | | | |
| Grab | Surface Water | Surface | 12 | 12 | 12 | 0 | 0 |
| **TOTAL FOR GRID and BACKGROUND SW SAMPLES** | | | **12** | **12** | **12** | **0** | **0** |
| **QC FOR ALL BACKGROUND SAMPLING** | | | | | | | |
| QC MS/MSD* {1/20 organics} | | Various | 2 | 2 | N/A | N/A | 0 |
| QC MS/MD* {1/20 organics} | | Various | N/A | N/A | N/A | 0 | N/A |
| QC trip blank {1/cooler for aqueous VOCs} | | N/A | 2 | 2 | N/A | N/A | N/A |
| QC field duplicate {1/10} | | Various | 4 | 4 | 4 | 0 | 0 |
| QC Equipment Rinsate | | Various | 1 | 1 | 1 | 0 | 0 |
| **TOTAL QC SAMPLES** | | | **9** | **9** | **5** | **0** | **0** |
| **INVESTIGATION-DERIVED WASTE** | | | | | | | |
| Hand sampling device | Site-wide | Drummed Waste | TO BE DETERMINED | | | | |
| **QC FOR INVESTIGATION-DERIVED WASTE** | | | | | | | |
| QC MS/MSD* {1/20 organics} | | Various | 0 | 0 | N/A | N/A | 0 |
| QC MS/MD* {1/20 organics} | | Various | N/A | N/A | N/A | 0 | N/A |

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| SAMPLING TYPE | AREA OF CONCERN NUMBER | INTERVAL (feet bgs) | ANALYSES | | | | |
|---|---|---|---|---|---|---|---|
| | | | TCL VOC | TCL SVOC | TAL METALS | PCBs | Herbicides and Pesticides |
| QC trip blank {1/cooler for aqueous VOCs} | | N/A | 0 | N/A | N/A | N/A | N/A |
| QC field duplicate {1/10} | | Various | 0 | 0 | 0 | 0 | 0 |
| QC Equipment Rinsate | | Various | 0 | 0 | 0 | 0 | 0 |
| **TOTAL QC SAMPLES** | | | **0** | **0** | **0** | **0** | **0** |

* MS/MSD and MS/MDs: These samples do not increase the number of samples, but represent additional volume of sample for laboratory QA/QC.

| | | | |
|---|---|---|---|
| AOC | Area of Concern | N/A | Not Applicable |
| bgs | Below Ground Surface | PCB | Polychlorinated Byphenyls |
| MD | Matrix Duplicate | QC | Quality Control |
| MS | Matrix Spike | SVOC | Semivolatile Organi |
| MSD | Matrix Spike Duplicate | VOC | Volatile Organic Compound |